PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference P033619wo	**FOR FURTHER ACTION** See Form PCT/IPEA/416	
International application No. PCT/GB2004/001311	International filing date *(day/month/year)* 26.03.2004	Priority date *(day/month/year)* 26.03.2003
International Patent Classification (IPC) or national classification and IPC A61K9/70		
Applicant METRIS THERAPEUTICS LTD. et al		

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 7 sheets, including this cover sheet.
3. This report is also accompanied by ANNEXES, comprising:
   a. ☒ *sent to the applicant and to the International Bureau)* a total of 1 sheets, as follows:
      ☒ sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).
      ☐ sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.
   b. ☐ *(sent to the International Bureau only)* a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).

4. This report contains indications relating to the following items:

☒	Box No. I	Basis of the opinion
☐	Box No. II	Priority
☒	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
☐	Box No. IV	Lack of unity of invention
☒	Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
☐	Box No. VI	Certain documents cited
☐	Box No. VII	Certain defects in the international application
☒	Box No. VIII	Certain observations on the international application

Date of submission of the demand	Date of completion of this report
24.01.2005	22.07.2005
Name and mailing address of the international preliminary examining authority: European Patent Office - P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk - Pays Bas Tel. +31 70 340 - 2040 Tx: 31 651 epo nl Fax: +31 70 340 - 3016	Authorized Officer von Eggelkraut-Gotta Telephone No. +31 70 340-4732

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.
PCT/GB2004/001311

Box No. I Basis of the report

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.

   ☐ This report is based on translations from the original language into the following language , which is the language of a translation furnished for the purposes of:
   - ☐ international search (under Rules 12.3 and 23.1(b))
   - ☐ publication of the international application (under Rule 12.4)
   - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)

2. With regard to the **elements*** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

Description, Pages

1-19	as originally filed

Claims, Numbers

12-32	as originally filed
1-11	filed with telefax on 07.07.2005

Drawings, Sheets

1/1	as originally filed

☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing

3. ☐ The amendments have resulted in the cancellation of:
   - ☐ the description, pages
   - ☐ the claims, Nos.
   - ☐ the drawings, sheets/figs
   - ☐ the sequence listing *(specify)*:
   - ☐ any table(s) related to sequence listing *(specify)*:

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
   - ☐ the description, pages
   - ☐ the claims, Nos.
   - ☐ the drawings, sheets/figs
   - ☐ the sequence listing *(specify)*:
   - ☐ any table(s) related to sequence listing *(specify)*:

* *If item 4 applies, some or all of these sheets may be marked "superseded."*

Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

1. The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non-obvious), or to be industrially applicable have not been examined in respect of:

☐ the entire international application,

☒ claims Nos. 28-32 with respect to industrial applicability

because:

☐ the said international application, or the said claims Nos. relate to the following subject matter which does not require an international preliminary examination (specify):

☐ the description, claims or drawings *(indicate particular elements below)* or said claims Nos. are so unclear that no meaningful opinion could be formed *(specify)*:

☐ the claims, or said claims Nos. are so inadequately supported by the description that no meaningful opinion could be formed.

☒ no international search report has been established for the said claims Nos. 28-32 with respect to industrial applicability

☐ the nucleotide and/or amino acid sequence listing does not comply with the standard provided for in Annex C of the Administrative Instructions in that:

the written form	☐	has not been furnished
	☐	does not comply with the standard
the computer readable form	☐	has not been furnished
	☐	does not comply with the standard

☐ the tables related to the nucleotide and/or amino acid sequence listing, if in computer readable form only, do not comply with the technical requirements provided for in Annex C-*bis* of the Administrative Instructions.

☐ See separate sheet for further details

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes:	Claims	1-32
	No:	Claims	
Inventive step (IS)	Yes:	Claims	1-32
	No:	Claims	
Industrial applicability (IA)	Yes:	Claims	1-27
	No:	Claims	

2. Citations and explanations (Rule 70.7):

see separate sheet

Box No. VIII Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

see separate sheet

III. Re Item III

Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

1

1.1 Claims 28-32 relate to subject-matter considered by this Authority to be covered by the provisions of Rule 67.1(iv) PCT. Consequently, no opinion will be formulated with respect to the industrial applicability of the subject-matter of these claims (Article 34(4)(a)(i) PCT).

V. Re Item V

Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

For the assessment of the present claims 28-32 on the question whether they are industrially applicable, no unified criteria exist in the PCT Contracting States. The patentability can also be dependent upon the formulation of the claims. The EPO, for example, does not recognize as industrially applicable the subject-matter of claims to the use of a compound in medical treatment, but may allow, however, claims to a known compound for first use in medical treatment and the use of such a compound for the manufacture of a medicament for a new medical treatment.

2 Reference is made to the following documents:

D1 : WO 01/80937 A (METRIS THERAPEUTICS LTD ; KNOX PETER (GB)) 1 November 2001 (2001-11-01)

3 INDEPENDENT CLAIM 1,21,28,29,31

3.1 The document **D1** is regarded as being the closest prior art to the subject-matter of claims 1,21,28,29,31 and shows (the references in parentheses applying to this

document): A drug delivery device for insertion in the vagina, rectum or nasal cavity comprising a drug such as fibrinolytic inhibitors (page 11, line 7 - page 12, line 27). An elastic lattice comprising a drug is attached to the surface of the body of the device (page 17, paragraph 1; figures 13,14). The device may comprise insertion means having a first hollow cylindrical tube and a second hollow cylindrical plunger (page 13, lines 10-16; claims 21-23).

3.2 The subject-matter of claim 1 differs from this known device in that D1 does not show a separate mesh sleeve. In D1 the fluid-impermeable layer forms an integral part of the device, whereas the subject-matter of claim 1 refers to a mesh sleeve adapted for use with a device for insertion into a bodily cavity and prepared separately from said device. The technical effect of that difference is that manufacturing process is greatly simplified by separating the production of the mesh sleeve with the pharmaceutical agent thereon from the device itself.

3.3 The subject-matter of claim 1 is therefore new (Article 33(2) PCT).

3.4 The problem to be solved by the present invention may be regarded as the provision of an apparatus for insertion into a bodily cavity for administering a drug which is easier to manufacture.

3.5 The solution to this problem proposed in claim 1 of the present application is considered as involving an inventive step (Article 33(3) PCT) for the following reasons: D1 does not disclose or suggest a mesh sleeve adapted for use with a device for insertion into a bodily cavity and prepared separately from said device.

3.6 For the reasons given above, independant claims 21,28,29,31 containing all the technical features of claim 1 are therefore also new and inventive.

3.7 Claims 2-20, 22-27, 30, 32 are dependent on claims 1,21,28,29,31 and as such also meet the requirements of the PCT with respect to novelty and inventive step.

VIII. Re Item VIII

Certain observations on the international application

4 The application does not meet the requirements of Article 6 PCT, because claims 19 and 20 are not clear.

4.1 Claims 19 and 20 contain references to the drawings. According to Rule 6.2(a) PCT, claims should not contain such references except where absolutely necessary, which is not the case here.

CLAIMS

1. A mesh sleeve adapted for use with a device suitable for insertion into a bodily cavity and prepared separately from said device such that in use the sleeve envelopes the body of the device, and wherein the sleeve comprises a pharmaceutical agent disposed thereon.

2. A sleeve according to claim 1, wherein the sleeve is adapted for use with a device suitable for insertion into the vaginal, rectal, nasal or buccal cavity.

3. A mesh sleeve according to claim 1 or claim 2, wherein said sleeve has one open end and one substantially closed end.

4. A mesh sleeve according to claim 1 or claim 2, which is open at both ends.

5. A mesh sleeve according to any one of claims 1 to 4, wherein said mesh sleeve can expand when the device expands during use.

6. A mesh sleeve according to claim 5, wherein the ability to expand is conferred by the presence of an overlap of mesh material.

7. A mesh sleeve according to claim 5, wherein the ability to expand is conferred by the elasticity of the mesh material.

8. A mesh sleeve according to claim 5, wherein the ability to expand is conferred by a combination of the elasticity of the mesh material and the presence of an overlap of mesh material.

9. A mesh sleeve according to any one of claims 1 to 8, which comprises a tethering component suitable for attachment of the sleeve to the body of the device.

10. A mesh sleeve according to claim any one of claims 1 to 9, wherein the material from which the mesh sleeve is made is cotton, such as non-wettable cotton.

11. A mesh sleeve according to any one of claims 1 to 10, which has 1, 2, 3, 4, 6, 8 10, 20, 50, 100 or more discrete pharmaceutical coupons attached thereto.